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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/559,977

12/09/2005

Peter Falb

09138.0083

6590

63432 7590 04/28/2009
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EXAMINER

SASAKI, SHOGO

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

04/28/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/559,977	Applicant(s) FALB ET AL.	
	Examiner Shogo Sasaki	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 December 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 7, 10, 24, 25, 29, 32, 34, 36, 37, 45, 47-49, 52, 56, 57, 59, 60, 66, 69, 73-75, 77-80, 87 and 96 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/9/2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/9/05, 12/15/07</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 1,7,10,24,25,29,32,34,36,37,45,47-49,52,56,57,59,60,66,69,73-75,77-80,87 and 96.

DETAILED ACTION

1. Amendments to the specification and the claims are acknowledged.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, “a shipping lock,” “a self priming element” and “a tip-down priming element” must be shown or the features canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 25, 73 and 74 are objected to because of the following informalities. Appropriate correction is required.

Regarding claim 25, it is suggested to recite "wherein said dual clamp element connected to said liquid reservoir to said metering chamber" instead of "wherein said dual clamp element connects said liquid reservoir to said metering chamber." The latter may be interpreted as an intended use for the dual clamp. Also, the specification does not describe how the clamping device acts as a connector/bridge for the liquid reservoir and the metering chamber. It appears that the dual clamping device is merely a two-piece housing or a part of housing (44) for the liquid reservoir and the part of the metering chamber assembly, which may inherently secure the assembly in place (p10-11). The figures 1 and 2 show the liquid reservoir and the metering chamber connected without said dual clamping device.

The automated system is not disclosed as a structural part of the dispenser, therefore the latter recitation is considered as an intended use of the dispenser.

Regarding claim 73 and 74, it is suggested to recite "wherein said reservoir is a ..." According to the specification, the reservoir does not comprise an additional reservoir as implied by the claim.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 1, 7, 10, 24, 25, 29, 32, 34, 36, 37, 45, 47-49, 52, 56, 57, 59, 60, 66, 69, 73-75, 77-80, 87 and 96 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 and 7, recitations "a metering chamber" in line 6 and 4 respectively render said claims indefinite. It is not clear if they are the same metering chambers recited previously in said claims or they are some other metering chambers. It is suggested to replace "a metering chamber" with "said metering chamber", or to define another metering chamber earlier in the claims.

Regarding claim 29, the recitation “further comprising an automated biological staining device” renders said claim indefinite. The specification does not support an automated biological staining device as an additional structural element. The biological staining device is merely an intended use of the device of claim 7 (p14 and p18 of WO 2005/000731:PCT/US2004/018642).

Regarding claim 34, the recitation “wherein said metering chamber comprises a repeatable liquid measurement element” renders said claim indefinite. The specification does not support a repeatable liquid measurement element as an additional structural element. The device is capable of repeatedly measuring amounts of liquid accurately with each compression of a metering chamber (p17 of WO 2005/000731:PCT/US2004/018642).

Claim 37 does not appear to further limit the subject matter of a previous claim. Claim 37 recites an inherent characteristic of the metering chamber already defined in claim 7.

Regarding claims 56 and 57, the recitations “wherein said valve disk and membrane comprises a seal” and “wherein said seal comprises a positive fluid seal” renders said claim indefinite. It is the membrane that closes the liquid flow opening and creates a seal. The seal positively seals the valve system. These are also explained in the specification. Thus claims 56 and 57 do not further limit claim 52.

Regarding claim 69, the recitation “wherein said reservoir comprises a collapsible molded reservoir and further comprising a reservoir collapse force less than a force required to uncompress said diaphragm” renders said claim indefinite. The collapse force is merely a characteristic of said reservoir. The recitation is interpreted to mean “wherein said reservoir comprises a collapsible molded reservoir, which has a reservoir collapse force less than a force required to uncompress said diaphragm.”

Regarding claim 75, the recitation “further comprising a reduced friction dispenser” renders said claim indefinite. The disclosed and claimed device provides less sliding/friction causing parts. The claimed element does not have

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support as an additional structural element to the device of claim 7 (p12-13 of WO2005/000731:PCT/US2004/018642).

Regarding claim 77, the recitation “further comprising a sealed system” renders said claim indefinite. The disclosed and claimed liquid dispenser must be inherently sealed. The sealing mechanism may be further/narrowly defined. However, the device of claim 7 does not further comprising a sealed system.

Regarding claim 78, the recitation “further comprising a self priming element” renders said claim indefinite. According to the specification, the self priming element is a combination of a flexible diaphragm and a metering chamber (p14 of WO 2005/000731:PCT/US2004/018642).

Regarding claim 96, recitations of active steps for opening/closing valves renders said claim indefinite. These valves open and close due to the flow of the fluid, thus said steps naturally/inherently occurs upon using the device. These valves are not actuated by manually or automatically by the operator.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 7, 10, 29, 34, 37, 45, 47, 52, 56, 57, 59, 66, 69, 73-75, 77-79, 87 and 96 are rejected under 35 U.S.C. 102(b) as being anticipated by Loeffler (US 6092695).

Regarding claims 7, 10, 29, 34, 37, 45, 47, 52, 56, 57, 59, 66, 69, 73-75, 77-79, 87 and 96, Loeffler discloses interchangeable liquid dispensing cartridge pump assemblies suitable for dispensing reagent in an automatic system comprising a compressible metering chamber suspended from a flexible reservoir bag mounted within a rigid housing (abstract; Figs 1-5; and columns 4-

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8). Check valves between the reservoir and metering chamber and at a lower end of a metering chamber are formed of flexible membranes having apertures which close against conical projections on rigid disks (id). The housing of the metering chamber is compressible/decompressible and acts as a diaphragm (Fig. 1-5). The horizontally actuated plunger may electromechanically activate the compressible/decompressible the housing of the metering chamber (Fig. 1c, 2b and 5b; and column 4-8). The unidirectional outlet valve comprises a small, inflexible valve disk 17 and 18, and a flexible elastomeric membrane 15 and 25, and seals the outlet (Fig. 2a and 2b; and column 4-8). The seal (14; or the inlet valve assembly) is provided between the reservoir and the chamber. The uncompression element is the force that can uncompress or displace a diaphragm to an uncompressed state, which in this case is the resiliency of the chamber wall (diaphragm). The reservoir collapse force must inherently be less than a force required to uncompress said diaphragm. Otherwise, the compression of the metering chamber will not direct fluid into the chamber. The reservoir of Loeffler is not an integral with the metering chamber, thus must be capable of being changed and refilled. The outlet tip of Loeffler is pointed downward.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1, 7, 10, 29, 32, 34, 36, 37, 45, 47-49, 52, 56, 57, 59, 60, 66, 69, 73-75, 77-79, 80, 87 and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loeffler (US 6092695) in view of Hughes (US 2711134).

Regarding claims 1, 7, 10, 29, 32, 34, 36, 37, 45, 47-49, 52, 56, 57, 59, 66, 69, 73-75, 77-79, 80, 87 and 96, Loeffler discloses interchangeable liquid dispensing cartridge pump assemblies suitable for dispensing reagent in an automatic system comprising a compressible metering chamber suspended from a flexible reservoir bag mounted within a rigid housing (abstract; Figs 1-5; and columns 4-8). Check valves between the reservoir and metering chamber and at a lower end of a metering chamber are formed of flexible membranes having apertures which close against conical projections on rigid disks (id). The housing of the metering chamber is compressible/decompressible and acts as a diaphragm (Fig. 1-5). The horizontally actuated plunger may electromechanically activate the compressible/decompressible the housing of the metering chamber (Fig. 1c, 2b and 5b; and column 4-8). The unidirectional outlet valve comprises a

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small, inflexible valve disk 17 and 18, and a flexible elastomeric membrane 15 and 25, and seals the outlet (Fig. 2a and 2b; and column 4-8). The seal (14; or the inlet valve assembly) is provided between the reservoir and the chamber. The uncompression element is the force that can uncompress or displace a diaphragm to an uncompressed state, which in this case is the resiliency of the chamber wall (diaphragm). The reservoir collapse force must inherently be less than a force required to uncompress said diaphragm. Otherwise, the compression of the metering chamber will not direct fluid into the chamber. The reservoir of Loeffler is not an integral with the metering chamber, thus must be capable of being changed and refilled. The outlet tip of Loeffler is pointed downward.

Loeffler's device does not comprise an integral assembly of: a metering chamber; an internal diaphragm compressor; internal mechanical stop; a spring as an uncompression element; and a plunger element.

Hughes (Fig. 1-3; and disclosure) disclose a device comprising: a metering chamber (16); an internal diaphragm compressor (30); internal mechanical stop (housing 11); a spring as an uncompression element (45); a plunger element (19, 20, 32, 31 and 42); and inlet and outlet valves (62 and 72). The diaphragm is capable of substantial conformation to at least part of said metering chamber. The actuation of the plunger may be performed manually (column 3, lines 38-75). Unless the actuator (80 and 85) is wound/unwound, the diaphragm of Hughes may stay at a compressed state, which may effectively be used as a shipping lock. According to the disclosure, the shipping lock is a device that keeps the diaphragm in a compressed state. The recitation "a liquid flow deflection element," is a kink/bent in the flow path leading from the reservoir outlet to the metering chamber. The device of Hughes includes such means (51).

It would have been obvious to one having ordinary skill in the art at the time of the invention to replace the metering chamber of Loeffler between the inlet and out let valve with the device of Hughes. The claim would have been obvious because the substitution of one known element for another would have

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yielded predictable results to one of ordinary skill in the art at the time of the invention. Also, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Regarding claim 60, modified Loeffler disclose all of the limitations as set forth above. Modified Loeffler do not explicitly disclose an o-ring or a flange o-ring as a sealing means. However an o-ring or a flange o-ring is a well know sealing device. Choosing an o-ring or a flange o-ring is an obvious choice. The claim would have been obvious because the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

12. Claims 7, 10, 29, 32, 34, 36, 37, 45, 47-49, 52, 56, 57, 59, 60, 66, 69, 73-75, 77-79, 80, 87 and 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loeffler (US 6092695) in view of Fessler et al. (US 4334838).

Regarding claims 7, 10, 29, 32, 34, 36, 37, 45, 47-49, 52, 56, 57, 59, 66, 69, 73-75, 77-79, 87 and 96, Loeffler discloses interchangeable liquid dispensing cartridge pump assemblies suitable for dispensing reagent in an automatic system comprising a compressible metering chamber suspended from a flexible reservoir bag mounted within a rigid housing (abstract; Figs 1-5; and columns 4-8). Check valves between the reservoir and metering chamber and at a lower end of a metering chamber are formed of flexible membranes having apertures which close against conical projections on rigid disks (id). The housing of the metering chamber is compressible/decompressible and acts as a diaphragm (Fig. 1-5). The horizontally actuated plunger may electromechanically activate the compressible/decompressible the housing of the metering chamber (Fig. 1c, 2b and 5b; and column 4-8). The unidirectional outlet valve comprises a small, inflexible valve disk 17 and 18, and a flexible elastomeric membrane 15 and 25,

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and seals the outlet (Fig. 2a and 2b; and column 4-8). The seal (14; or the inlet valve assembly) is provided between the reservoir and the chamber. The uncompression element is the force that can uncompress or displace a diaphragm to an uncompressed state, which in this case is the resiliency of the chamber wall (diaphragm). The reservoir collapse force must inherently be less than a force required to uncompress said diaphragm. Otherwise, the compression of the metering chamber will not direct fluid into the chamber. The reservoir of Loeffler is not an integral with the metering chamber, thus must be capable of being changed and refilled. The outlet tip of Loeffler is pointed downward.

Loeffler's device does not comprise an integral assembly of: a metering chamber; an internal diaphragm compressor; internal mechanical stop; a spring as an uncompression element; and a plunger element.

Fessler et al. (Fig. 1-5; and disclosure) disclose a device comprising: a metering chamber (12); an internal diaphragm compressor (30); internal mechanical stop (housing 11 and ribs 25); a spring as an uncompression element (18); a plunger element (19, 20, 32, 31 and 42); and inlet and outlet valve (14 and 15). The diaphragm is capable of substantial conformation to at least part of said metering chamber. The actuation of the plunger may be performed manually (column 3, lines 53-59).

It would have been obvious to one having ordinary skill in the art at the time of the invention to replace the metering chamber of Loeffler between the inlet and the outlet valve with the device of Fessler et al. The claim would have been obvious because the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Also, all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

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Regarding claim 60, modified Loeffler disclose all of the limitations as set forth above. Modified Loeffler do not explicitly disclose an o-ring or a flange o-ring as a sealing means. However an o-ring or a flange o-ring is a well know sealing device. Choosing an o-ring or a flange o-ring is an obvious choice. The claim would have been obvious because the substitution of one known element for another would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Regarding claim 80, modified Loeffler disclose all of the limitations as set forth above. Modified Loeffler do not explicitly disclose that the device may further comprise a shipping lock. According to the disclosure, the shipping lock is a device that keeps the diaphragm in a compressed state.

It would have been obvious to one having ordinary skill in the art at the time of the invention to include a means to keep the diaphragm at compressed state and used it as a shipping lock, for the purpose of preventing liquid flowing in the metering chamber, thus preventing possible leakage of liquid from the outlet valve. This merely acts as a lid/cover to a liquid container. The concept of sealing a container material including liquid for shipping is well known in the art and is a common sense.

The claim would have been obvious because “a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.”

13. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loeffler (US 6092695); Loeffler (US 6092695) in view of Hughes (US 2711134); or Loeffler (US 6092695) in view of Fessler et al. (US 4334838), and in further view of Bogen et el. (US 6180061).

Regarding claims 24 and 25, Loeffler and both modified Loeffler disclose all of the limitations as set forth above.

Loeffler or both of modified Loeffler do not teach that the reservoir housing or a part of the reservoir housing (a dual clamp) connects/connected to the bag and the part of the metering chamber. The reservoir connected to the metering chamber is suspended within the reservoir housing.

Bogen et al. disclose (Fig. 15 and 16) a similar liquid dispenser comprising a collapsible liquid reservoir; a compressible metering chamber with inlet and outlet valves; a horizontally actuated plunger; and a housing which encases the collapsible liquid reservoir and the compressible metering chamber (column 9, line 50-column 10, line 48). The open end of the collapsible reservoir fits snugly about an inlet end of a metering chamber tube 616 and is clamped and thus sealed to the tube by plates (618), which also serves as a closure to the housing (column 9, line 57-61).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the invention of Loeffler or modified Loeffler to fix the collapsible liquid reservoir and the compressible metering chamber by holding them with housing pieces/clamps as taught by Bogen et al., for the purpose of securing the collapsible liquid reservoir and the compressible metering chamber relative to the housing.

14. Claim 80 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loeffler (US 6092695) in view of Fessler et al. (US 4334838), and in further view of Hughes (US 2711134).

Regarding claim 80, modified Loeffler disclose all of the limitations as set forth above. Modified Loeffler do not explicitly disclose that the device may further comprise a shipping lock. According to the disclosure, the shipping lock is a device that keeps the diaphragm in a compressed state.

Hughes discloses (Fig. 1 and disclosure) essentially the same device as Fessler et al. Unless the actuator (80 and 85) is unwound, the diaphragm of Hughes stays at compressed state. Fessler et al. teaches a manual operation of the plunger.

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It would have been obvious to one having ordinary skill in the art at the time of the invention to include the manual screw actuation as taught by Hughes and used it as a shipping lock, for the purpose of preventing liquid flowing in the metering chamber.

15. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Loeffler (US 6092695) in view of Hughes (US 2711134); or Loeffler (US 6092695) in view of Fessler et al. (US 4334838), and in further view of Krawzak et al. (US 5232664: Fig. 1, 4 and 5); Rokugawa (US 4844868: Fig. 4 and 5); Arway (US 4555719: Fig. 4); Okuyama et al. (US 5433351: Fig. 3, 4 and 6); or Danby et al. (US 4846636: Fig. 2 and 3).

Regarding claim 1, both of modified Loeffler disclose all of the limitations as set forth above. Modified Loeffler may not explicitly teach “a liquid flow deflection element,” which is a kink/bent in the flow path leading from the reservoir outlet to the metering chamber.

Krawzak et al. (US 5232664: Fig. 1, 4 and 5); Rokugawa (US 4844868: Fig. 4 and 5); Arway (US 4555719: Fig. 4); Okuyama et al. (US 5433351: Fig. 3, 4 and 6); or Danby et al. (US 4846636: Fig. 2) all disclose liquid dispensers comprising a liquid reservoir or a compressible liquid reservoir; a compressible (via compression of air inside the chamber or by providing a chamber having compressible wall) metering chamber with inlet and outlet valves; a plunger; and a non linear flow path leading from the reservoir outlet to the metering chamber inlet.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the invention of modified Loeffler to incorporate a non linear flow path, since change in configuration is generally recognized as being within the level of ordinary skill in the art. In this instance, the disclosed configuration or a claimed kink in the flow path appears to be selected for mere convenience in designing the liquid dispensing device.

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Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shogo Sasaki whose telephone number is (571)270-7071. The examiner can normally be reached on Mon-Thur, 10:00am-6:30pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SS

4/21/2009

/Brian R Gordon/

Primary Examiner, Art Unit 1797